



UNITED STATES PATENT AND TRADEMARK OFFICE

la

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/829,494

04/21/2004

Sheau Yang Ch'ng

70031106-1

6927

7590

06/14/2005

AGILENT TECHNOLOGIES, INC.

Legal Department, DL 429

Intellectual Property Administration

P.O. Box 7599

Loveland, CO 80537-0599

EXAMINER

WYATT, KEVIN S

ART UNIT

PAPER NUMBER

2878

DATE MAILED: 06/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/829,494	Applicant(s) CH'NG ET AL.	
	Examiner Kevin Wyatt	Art Unit 2878	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 April 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____ | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Specification

1. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Drawings

2. Figure 3 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.
3. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the reflective medium disclosed in claims 4 and 9 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure

Art Unit: 2878

is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-3,5-8 and 10 are rejected under 35 U.S.C. 102(b) as being anticipated by Ohtomo (U.S. Patent No. 6,093,928).

Regarding claims 1 and 6, Ohtomo shows Figs. 1 and 3b a method and apparatus comprising: a) a code strip carrier (100, i.e., rotor) having a plurality of code tracks (110 and 120, i.e. main scale and zero detecting indices), b) an illumination system (311 and 321, i.e., first light emitting device and second light emitting device) generating a light signal from each code track comprising a plurality of light and dark

Art Unit: 2878

stripes (producing an occulting pattern), c) a plurality of read heads each comprising a photodetector (313 and 323, i.e. first photosensor and second photosensor) positioned to detect light from a corresponding one of said code tracks (110 or 120, i.e. main scale or zero detecting indices) as that code track moves relative to said read head, d) a controller (400) for generating an absolute position value related to the position of said code strip carrier, e) a first absolute position track that provides an indication of said absolute value when said code strip carrier is at each of a plurality of predetermined positions relative to said origin position (generating an absolute position value which represents the angle between the reference point (zero point) and the optional point), and f) an incremental position track for generating a digital value indicative of a displacement of said code strip carrier relative to the last predetermined absolute position (110, i.e., main scale that generates a number of light pulses fed into the input of main scale detection signal amplifier (601) whose output passes through stages 603 and 604 then feeds two counters (605 and 608) where the difference between 605 and 608 correspond to the angular distances between adjacent indices) (col. 4, lines 28-34 and 44-47, col. 6, lines 5-15).

Regarding claims 2 and 7, Ohtomo provides a method and apparatus comprising a first absolute position track comprising plurality of unique code sequences (each of the zero detecting indices (120) are arranged at different angular pitches at the periphery of rotor (100) so that different numbers of graduation lines of the main scale (110) provide a unique set of numbers that correspond to respective angular distances between adjacent indices (120), col. 4, lines 43-54).

Art Unit: 2878

Regarding claims 3 and 8, Ohtomo shows in Figs. 1 and 5 a method and apparatus wherein said incremental track comprises alternating dark and light stripes (main scale 110) is an occulting pattern of graduation lines) wherein said read head (photosensor 323) corresponding to said incremental position track (main scale 110) generates a first logic signal indicating direction of travel (main scale detection signal amplifier (601) provides a logic signal for direction identifying circuit (604) identifying the direction of rotation or direction of increase or decrease) and a second logic signal (i.e., rectangular pulse generator (603)) that changes state each time a boundary between a dark stripe and light stripe (occulting pattern of graduation lines) passes under that read head (col. 4, lines 41-46 and).

Regarding claims 5 and 10, Ohtomo shows in Fig. 3b a method and apparatus wherein one of said tracks comprises a state track (main scale 110) that provides a state value (output from main scale detecting unit (320) resulting from main scale light pulses) corresponding to each of a plurality of said absolute position values (counts from first counter (510) and second counter (520) triggered by zero the detection indices (120)) and wherein said controller (400) outputs said state value and said absolute value (count difference between first counter 510 and second counter 520 and angle between zero point and position of second index) (col. 5, lines 51-58, 58-60, 61-68, col. 6, lines 1-4 and 5-16).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 4 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ohtomo (U.S. Patent No. 6,093,928) in view of Bouldin (U.S. Patent No. 4,463,089).

Regarding claims 4 and 9, Ohtomo discloses the claimed invention as stated above. Ohtomo does not disclose a code strip carrier comprising a reflective medium having a reflectivity that is altered by exposing said medium to light of an intensity greater than a predetermined intensity. Bouldin shows in Figs. 1 and 2 a code strip carrier (i.e., disk 11) comprising a reflective medium (i.e. low melting temperature colloid matrix (17) comprising a thin layer of reflective silver particles (19) atop of an underlayer of black filamentary silver particles (18)) having a reflectivity that is altered by exposing said medium to light of an intensity greater than a predetermined intensity (decreased reflectivity of colloid matrix as a result of pits produced by record beam energy, col. 1, lines 36-41). It would have been obvious to one skilled in the art to provide the reflective laser recording medium of Bouldin to the device of Ohtomo for the purpose of achieving high resolution optical data storage.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Setbacken (U.S. Patent No. 5,936,236) discloses a method and device for generating a reference signal for comparison with scanning signals generated by a position measuring device.

Rowe (U.S. Patent No. 5,210,409) discloses an apparatus and method for sensing the relative position of two members employing a variable wavelength source and wavelength dependent scanner.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin Wyatt whose telephone number is (571)-272-5974. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dave Porta can be reached on (571)-272-2444. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.


Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should

Art Unit: 2878

you have questions on access to the Private PAIR system, contact the Electronic
Business Center (EBC) at 866-217-9197 (toll-free).



K.W.


THOMAS X. LUU
PATENT EXAMINER